Date: Thu, 10 Feb 94 04:30:24 PST
From: Ham-Ant Mailing List and Newsgroup <ham-ant@ucsd.edu>
Errors-To: Ham-Ant-Errors@UCSD.Edu
Reply-To: Ham-Ant@UCSD.Edu
Precedence: Bulk
Subject: Ham-Ant Digest V94 #28
To: Ham-Ant

Ham-Ant Digest Thu, 10 Feb 94 Volume 94 : Issue 28

Today's Topics:

2 mtr antenna on camper question (2 msgs)
75 ohm twinlead
Antenna Erection Aids
comments on RS SWR/Power meter
Copper Dual-Band Super J-Pole Antenna
Ground Wave Propagation
Need Wideband RX antenna recommendation
Source of 300 kHz couplers needed

Send Replies or notes for publication to: <Ham-Ant@UCSD.Edu>
Send subscription requests to: <Ham-Ant-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Ant Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-ant".

Date: Tue, 8 Feb 94 19:08:41 GMT
From: sequent!muncher.sequent.com!dale@uunet.uu.net
Subject: 2 mtr antenna on camper question
To: ham-ant@ucsd.edu

I'm looking for someone that has mounted a 2 meter antenna on a
railing rather than directly to auto roof. I was at the coast
this weekend and brought down a good wattmeter to check out a
2 meter antenna that I have over there. A neighbor that is a ham
mentioned that he had broken his mobile antenna and perhaps I
would check things out as he replaced it. Being a really nice guy
I told him that I would be happy to do so.

He has a dual band radio and had a mag mount base sitting on the
hood of his pickup/camper combination. This has an NMO base

and he had a Larson dual band antenna. His radio was putting out close to 50 watts and just a watt or less reflected as I recall. Anyway, things looked perfect. I told him everything was great.

But this wasn't actually the installation he was going to use. Turns out a friend helped him install an NMO mount on the roof of the camper, and driving under something he broke the antenna. He purchased this replacement and so was going to place this back on the camper. He unscrewed the dual band antenna from the NMO mount on the mag-mount base. I told him that as he was using the identical whip it should be fine on top of his camper. This fellow is considerably older than I am, so I offered to climb up on the roof of the camper and install the antenna (I told you I was a nice guy).

Once up on the camper I found that it has the typical aluminum roof with a small railing around the roof. This railing is 4 or 5 inches high, and that is where the NMO mount was bolted. It is on some type of base which is made to clamp to railings like this. Of course the antenna is no longer as close to the ground plane as it was with the mag-mount base. I installed the antenna and suggested that we now check things out. I found that there was 10 watts reflected using this installation. Not too good. The radio seemed to still put out close to full power which I found a little unusual. (Kenwood 732). I suggested that he might want to stick with the mag mount until my next trip down when we could work to improve things a bit. He will do this.

The railing can be considered as one element of a ground plane, and so one idea is to add a few more radials. Since this is next to the side of the camper it is not going to be easy to have a radial sticking out on that side. Note that the railing does have good electrical connection to the camper roof.

Does anyone have experience adding radials to this sort of an installation? I don't know how much adjustment, if any, the antenna allows in length, and as it is perfect with the mag-mount base I hate to change that. What options do I have to help this fellow? I thought about making some sort of a bracket that clamped to the railing and brought the NMO mount down near the top of the camper. I'd like ideas and suggestions, and if someone has tried just adding some radials to this type of installation please let me know how that worked.

Thanks & 73, Dale, N7PEX

--
  dale@sequent.com   OR   uunet!sequent!dale
  Dale Mosby   503-578-9842 N7PEX // Sequent Computer Systems, Inc.

  15450 SW Koll Parkway   // Beaverton, Or. 97006-6063

Date: Wed, 9 Feb 1994 00:02:27 GMT
From: ucsnews!sol.ctr.columbia.edu!howland.reston.ans.net!usenet.ins.cwru.edu!
gatech!wa4mei.ping.com!ke4zv!gary@network.ucsd.edu
Subject: 2 mtr antenna on camper question
To: ham-ant@ucsd.edu

In article <1994Feb8.190841.4006@sequent.com> dale@sequent.com (Dale Mosby)
writes:
>I'm looking for someone that has mounted a 2 meter antenna on a
>railing rather than directly to auto roof.

I've done it, it stinks.

>The railing can be considered as one element of a ground plane,
>and so one idea is to add a few more radials. Since this is next
>to the side of the camper it is not going to be easy to have a
>radial sticking out on that side. Note that the railing does
>have good electrical connection to the camper roof.

DC!=RF as you discovered.

>Does anyone have experience adding radials to this sort of an
>installation? I don't know how much adjustment, if any, the
>antenna allows in length, and as it is perfect with the mag-mount
>base I hate to change that. What options do I have to help
>this fellow? I thought about making some sort of a bracket that
>clamped to the railing and brought the NMO mount down near the
>top of the camper. I'd like ideas and suggestions, and if someone
>has tried just adding some radials to this type of installation
>please let me know how that worked.

Radials can help, but I think your second idea is better. Since
you don't want to punch a hole in the aluminum roof, you'd likely
need a backing plate if you did since this stuff is really thin,
your best course is to emulate a mechanical magmount. If you can
fasten a bent plate to the rail so that the bulk of it lies against
the aluminum top, and put the NMO out in the center of that, you'll
get the capacitive RF coupling you get with a normal magmount, and
it should work fine. An aluminum rack panel would be a good material
to use. Forming this without a brake can be tough. You can get by
with a couple of pieces of 2x4 in a vise and a bit of hammering.
Get the NMO as far from the rail rise as possible or it'll distort
the pattern.

Gary
--
Gary Coffman KE4ZV | You make it, | gatech!wa4mei!ke4zv!gary
Destructive Testing Systems | we break it. | uunet!rsiatl!ke4zv!gary
534 Shannon Way | Guaranteed! | emory!kd4nc!ke4zv!gary
Lawrenceville, GA 30244 | |

Date: 7 Feb 94 17:31:15 GMT
From: agate!howland.reston.ans.net!pipex!uknet!EU.net!Germany.EU.net!netmbx.de!
zrz.TU-Berlin.DE!cs.tu-berlin.de!math.fu-berlin.de!news.th-darmstadt.de!fauern!
rz.unibw-muenchen.de!claude@network.
Subject: 75 ohm twinlead
To: ham-ant@ucsd.edu

claude@bauv.unibw-muenchen.de (Claude Frantz) writes:

>rkarlqu@scd.hp.com (Richard Karlquist) writes:

>>An article on the G5RV antenna mentions 75 ohm "transmitting"
>>type twinlead for the 34 foot matching section. Can someone
>>tell me where to buy this stuff?

>Some years ago, there was such a product in the Amphenol catalog.

>>What gauge wire is it
>>and what type of plastic (polyethelene?)? What is the
>>loss per 100 feet at HF?

>If you cannot get the information, please ask me again. I will
>try to find my old catalog.

Here is the information:

Amphenol number 214-023: 75 ohm oval type twin-lead transmission
line capable of handling 1 kW of RF power in amateur applications.
Conductors: 7 AWG-21 copper.

There is a low power type too: Amphenol number 214-080, 7 AWG-28
tinned copper. No information about power rating.

73,
--
Claude F. (claude@bauv106.bauv.unibw-muenchen.de)

The facts can speak for themselves.

Date: Mon, 7 Feb 1994 08:03:33 -0500
From: nntp.ucsb.edu!library.ucla.edu!csulb.edu!nic-nac.CSU.net!usc!
howland.reston.ans.net!news.ans.net!malgudi.oar.net!news.ysu.edu!psuvm!cunyvm!
rohvm1!rohvm1.mah48d@network.ucsd.edu
Subject: Antenna Erection Aids
To: ham-ant@ucsd.edu

In article <1994Feb6.144242.14808@bongo.tele.com>, julian@bongo.tele.com
(Julian Macassey) wrote, in part:

> The favourites seemed to be: bow
> and arrow or catapult (sling shot) and spinning (fishing) reel with a
> weight.
>
> The most compact and least troublesome is the catapult and
> fishing reel combo.
> The bow and arrow solution can use a fishing reel, but usually
> involves a second person to hold a rod and line while someone does the
> Robin Hood stuff. The second person often ends up being a grumpy
> spouse who needs no further persuasion that amateur radio is a waste
> of time, money and useful house space.

One can also purchase a fishing reel that mounts to the bow, and is
intended to pay out line to an arrowhead used in carp fishing. Check the
archery supply stores or some of the mail-order places (bowfishing is
probably illegal in some states, so it might be hard to get the equipment
locally.

Personally, I've used the standard rod-and-reel approach, with a 3-oz
sinker and 25-lb-test spinning line.

--
73 de John Taylor   W3ZID
rohvm1.mah48d@rohmhaas.com

Date: 5 Feb 94 22:17:23 MDT
From: pacbell.com!sgiblab!swrinde!elroy.jpl.nasa.gov!ncar!csn!hellgate.utah.edu!
cc.usu.edu!NewsWatcher!user@network.ucsd.edu
Subject: comments on RS SWR/Power meter
To: ham-ant@ucsd.edu

I need a simple SWR/Power meter for 2m/440 band. is the

radio shack SWR/Power meter ($40) good ? any other brand
to consider ? (hopefully within that price range also).

please email response if possible
thanks in advance

jerry n3rkd

Date: Wed, 9 Feb 1994 18:01:51 GMT
From: spsgate!mogate!newsgate!nuntius@uunet.uu.net
Subject: Copper Dual-Band Super J-Pole Antenna
To: ham-ant@ucsd.edu

In article <CKw8Eu.8n0@on.bell.ca> Yvan Dupont, ydupont@Qc.Bell.CA writes:
>Did someone build that antenna from KA0NAN that was on the April issue
>of "73 Amateur Radio Today"? What are your experience with it? Ease of
>construction and performance???
>
>Please reply directly to: ydupont@Qc.bell.CA

I tried to send this direct but it bounced. I have built a couple of
copper cacti....and they both work well on both bands. I don't recall
the exact SWR numbers, but I seem to remember 1.2:1 and 1.5:1 or so.
Construction was straight forward, but make sure you use a high temp
dielectric on the connector or it will melt when you solder the connector
on.
have fun.....Rick

Date: 9 Feb 1994 03:53:02 -0600
From: library.ucla.edu!nntp.ucsb.edu!mustang.mst6.lanl.gov!nntp-
server.caltech.edu!netline-fddi.jpl.nasa.gov!elroy.jpl.nasa.gov!swrinde!
cs.utexas.edu!not-for-mail@network.ucsd.edu
Subject: Ground Wave Propagation
To: ham-ant@ucsd.edu

Hi There from Milano,

I am looking for information on algorithms to predict propagation
by ground waves. I have heard that some research has been done by the
US Army, and de-classified after WWII (Bell prediction system?).

I would be grateful for any pointer to articles, books or code in
this direction.

Thank You.

Alfredo
A.Cotroneo@it12.bull.it or 100020.1013@compuserve.com

Date: 9 Feb 1994 13:40:45 -0500
From: agate!howland.reston.ans.net!wupost!ukma!news-feed-2.peachnet.edu!
st6000.sct.edu!not-for-mail@network.ucsd.edu
Subject: Need Wideband RX antenna recommendation
To: ham-ant@ucsd.edu

chrism@col.hp.com (Chris Magnuson) writes:
>
> I would like to have an antenna I can mount on my house that can pick up
> signals from 25 or 50MHz on up to 905 MHz. The antenna would be a
> receive only proposition (for scanning, etc.).
>
> Any recommendations?
>
> Thanks,
> Chris Magnuson
> chrism@col.hp.com

I would reccommend a discone antenna. They usually have a range of about
20-1300 MHz. Radio shack sells one that works fine. I believe comet or
diamond also has one that I have heard works well. Be sure and use good coax
and/or a preamp at the antenna as lossy cable will ruin your reception.
There was a discussion on a newsgroup here about someone having trouble with
such an installation. I don't know if you're an amateur, but most discones
can also be used as transmitting antennas too.

Good luck
Matt Smith
msmith@st6000.sct.edu
matt.smith@swsbbs.com
KD4HME
PGP Public key available via finger

Date: Tue, 8 Feb 1994 20:35:00 GMT
From: rit!sunsrvr6!jdc@cs.rochester.edu
Subject: Source of 300 kHz couplers needed
To: ham-ant@ucsd.edu

In article <CKLyEB.67q@cs.dal.ca>, Dave Hazen <hazen@server.open.dal.ca> wrote:

>A bit lower frequency than most of you are used to but...
>
>We have a receiver for GPS correction signals which are
>transmitted on a CoastGuard beacon at around 300 kHz (295 to be precise).
>
>We purchased a beacon receiver from Magellan which includes an
>"antenna coupler" at the end of the coax. The coupler is essenitally
>an rf pre-amp powered by a trace dc voltage on the coax. Initially
>the system had an 8 ft whip which did not work very well, kept losing
>sync with the correction signal. Eventually replaced the whip with
>a 25 ft long-wire which worked better but still lost sync. Best
>hypothesis is that the pre-amp's bandwidth is too wide/gain too low
>to pull the signal out of the ether. Hence I am looking for sources
>for a third-party coupler. Any suggestion?

How about a tuned loop antenna with a coax cable pickup. MW (a.k.a. AM broadcast band) and LW DXer's use them with good results. They are easy to build and cheap. All you need is a 8-foot furring strip, some magnet or other single strand wire, and a tuning capacitor from an old AM radio. A preamp with a single MPF102 FET helps but isn't really needed.

The National Radio Club is an association for MW DX enthusiasts, and has several excellent and inexpensive publications on this arcane topic. Anybody have the address handy? My price list is at home.

>
>(I know I could build my own, but as this is a paying project, my
>time becomes a consideration and I have to look for off-the-shelf
>solutions first)
>
>While we are on this theme, any suggestions on a low cost reciever
>to work at this freq for debugging purposes. (I know - wrong newsgroup
>but figured I would ask)
>
I use my Radio Shack DX-440 with the aforementioned tuned loop, and there are many other radios that cover the LW band. A tuned loop should add enough front-end selectivity to make nearly anything useable.
>thanks
>
>dave
>
>--
>Dave Hazen   InterNet: hazen@open.dal.ca
>Dept. of Oceanography   Telemail: dalhousie.ocean
>Dalhousie University   Voice: (902) 494-3396
>Halifax, NS CANADA B3H 4J1   FAX: (902) 494-3877

End of Ham-Ant Digest V94 #28
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